

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023111**Date Inspected:** 21-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Liu hua jie**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder( OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG Trial Assembly open yard.

Segment:13CE

The following Non Destructive Testing (NDT) Inspection was carried out as per the ZPMC submitted Notification No.08891.

**Magnetic Particle Testing (MT)**

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a MT report for this date. The members are identified as OBG weld Components. Total number of welds MT Tested: 24 No's. The weld designations inspected were as follows:

1. LD3030-001-232, 249, 250, 253, 254, 255, 256, 259, 260, 277, 278, 281, 282, 283, 284, 287, 288
2. LD3030-001-231
3. FB3166A-001-049, 050, 055, 056, 061, 062

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

During QA MT verification of welds located on OBG Longitudinal diaphragm (LD) LD3030A, this QA observed one Longitudinal Linear toe crack measuring approximately 60 mm in length. The weld is identified as: LD3030-001-231. This weld is a fillet weld joining LD base plate (X3687B) to "I" rib Stiffener plate (X3793E). The LD base plate is designated as Seismic Performance Critical Material (SPCM) as per the approved shop drawing. The "Y" location is approximately 260 mm from East side of the weld termination (as shown on picture below). Both LD base plate and stiffener plate thickness is 25 mm. The crack is clearly marked on the material near the weld. Segment 13CE is currently located in the OBG Trial assembly area. The crack has been shown to the ZPMC MT Technician prior to the grinding process. This crack was removed at an approximate depth of 5 mm.

This QA Inspector generated an Incident Report on this date for the above issue. For further information reference the Incident Report with the attached photos.

Segment: 13CW

The following Non Destructive Testing (NDT) Inspection was carried out as per the ZPMC submitted Notification No. 08885.

MT

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a MT report for this date. The members are identified as OBG weld Components. Total number of welds MT Tested: 9 No's. The weld designations inspected were as follows:

1. SEG3015C-151, 152, 155, 156, 159, 147, 149
2. SEG3015F-334, 335

Segment: 13AW

This QA Inspector randomly observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint identified as FB3178-001-167. Welder is identified as 067609. ZPMC QC is identified as Mr. Zhang Qiang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM-1.

SMAW welding of weld joint identified as SEG3013AA\*-043. Welder is identified as 066179. ZPMC QC is identified as Mr. Zhang Qiang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2213-TC-U4b-FCM-1.

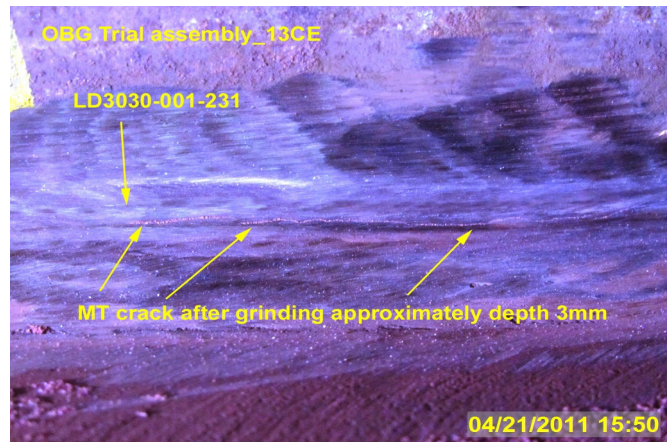
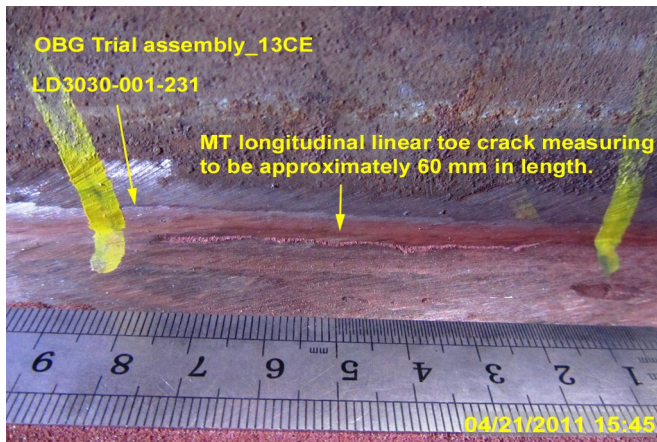
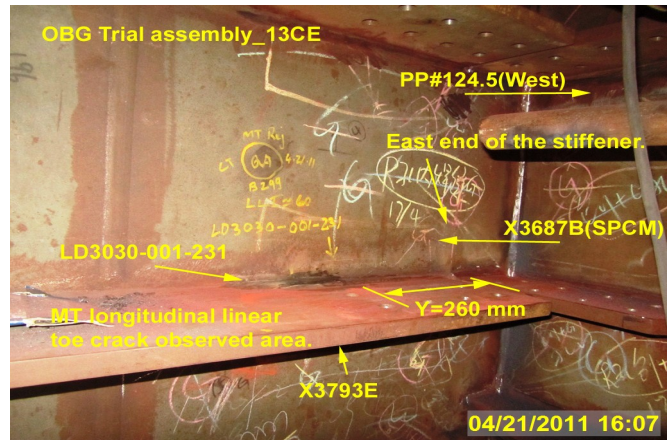
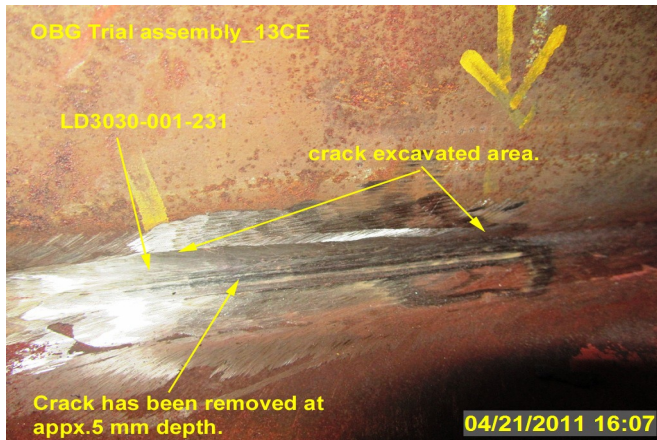
SMAW welding of weld joint identified as SEG3013AA\*-068. Welder is identified as 066398. ZPMC QC is identified as Mr. Zhang Qiang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2213-TC-U4b-FCM-1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

documents.



## Summary of Conversations:

No significant conversations were reported on this date.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

**Reviewed By:** Peterson,Art

QA Reviewer